Notes from the 01/03/06 MI BPM Upgrade Meeting
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These notes can be found in Beams docDB #1526.

Agenda as announced:

Project Announcements : Bob and Steve
Combiner Board status : Marv, Tim, Bob Forster, Vince
Transition Board: Manfred, Stefano, Vince, Bob Forster
Timing Board : Bill
Front-end software : Steve, Margaret
MI40 status : Marv, Peter, Manfred, Bill, Rob, Bob, others
Online software : Brian
Validation: Rob Kutschke
AOB

0. Project Announcements

- No specific announcements. We are working toward our "goal" of having a functional replacement of one house of MI BPM's at about January 15.

1. Combiner Board status : Marv, Tim, Bob Forster, Vince

- 15 boards were installed in mid-December and no new opportunities for installation have occurred since then. There are about 75 more to install. They will be installed as the opportunities arise.

2. Transition Board: Manfred, Stefano, Vince, Bob Forster

- Much has been done and there was much to report.

- The 1st 8-channel prototype is 95% assembled and will be tested. There are a few parts missing (not yet delivered) that should come soon -- the hybrids on the input and the some of the capacitors. Some of this can be bypassed and testing can proceed.

- Two channels of the 8 channel board are complete and tested. Part of the digital control is tested. 11 crates (the frames) and power supplies are here but the backplanes still are to be ordered. A test setup has been put together by borrowing equipment and parts to build a crate that can be used for testing and eventually for the MI40 system.

- The plan is to build 2 more 8 channel boards as soon as parts are available.

- Stefano showed some slides about the progress being made on the control system for the transition board. His slides can be found in beams-doc-1526 (along with these minutes). An updated document will be written and put into docDB later.

- Stefano showed some diagrams of the control system, the cards associated with it, and the status of the design and layout. Parts are being ordered and it is hoped that the boards can be fabricated relatively soon.

- Bakul and Bob Forster will work with Manfred to get the requisition for the fabrication of the transition boards approved and in purchasing as soon as possible. The final drawings (files) will come as soon as the prototype testing is complete.

3. Timing Board : Bill

- No big changes. The boards are being built and tested. 6 boards have been built and 3 have been tested. The transition card is coming.

4. Front-end software : Steve, Margaret
Software specfication document

- Steve showed status and gave updates on what is working and in the process of being implemented and debugged.

- Flash, TBT, CO is working.

- Some issues with read-out and timing are being worked on.

- ANCET readout is implemented but still needs to be interfaced to the applications. Raw data mode is being implemented.

- A discussion of specifications last week brought up some interesting issues that are being actively pursued, including how to maintain the current functionality (even knowing what the current functionality is, exactly), how to handle state changes and readout requests, etc.

- An update to the software specifications will be released soon (before Friday). Alberto will call a meeting, probably for Friday, to continue the discussion on software specifications, with some focus on applications.

- In addition, there was some discussion about house-to-house, or maybe more correctly service building to service building, or maybe both, timing. This is partially about strategy and whether it makes sense to install two crates in two different buildings relatively soon, or at least before the shutdown, to see whether the timing issues can be

sorted out and understood before the beam goes away for 12 weeks. It is something to think about.

5. Online software : Brian

- Work continues on the diagnostic application and other areas of online software.

- Brian will be looking at the whole area of applications and how we will transition to the new system.

6. MI40 status : Dave, Bob
Validation: Rob Kutschke

- Rob showed quite a few plots, almost all of them can be found in beams-doc-2060 and beams-doc-2080.

- Most features of the plots are understood or understand-able, but there are a few unresolved issues. It was suggested that NUMI-only cycles be used to help sort out some of the confusion since slip-stacking does add some complication to the behavior of the accelerator.

- Alberto asked about closed orbit resolution and suggested a few ways to measure it.

- Rob showed some data from late last week that showed all of the batches going into the machine which looked rather nice.

7. AOB

- Dave mentioned that during the shutdown one of the wide aperture BPMs will move and this will slightly change the configuration of the final system. We will need to be sure to get all the details so that the proper electronics will be used as well as the proper scale factors, correction factors, etc.